

Supplementary material

Drought sensitivity of *Empetrum nigrum* shrub growth at the species' southern lowland distribution range margin

Plant Ecology

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Table S1 Statistics of the selected linear mixed effect models in the model analysis across sites with random intercepts for ‘year’ and ‘site’. AIC: Akaike Information Criterion; s.e.: standard error; mR^2 : marginal R^2 (proportion of variance explained by fixed factor); cR^2 : conditional R^2 (proportion of variance explained by fixed and random factors). Selected models are models with AIC-values of at least 2 lower than the corresponding null model. Prev.: previous; min_ T_{surf} : minimum surface temperature; T: mean air temperature; P: precipitation sum.

Site	Selected models	ΔAIC	Slope (s.e.)	mR^2	cR^2
Spiekeroog	autumn min_ T_{surf}	5.84	-0.33 (0.10)	0.14	0.25
	autumn T	3.60	-0.29 (0.12)	0.10	0.25

Table S2 Statistics of the selected linear mixed effect models in the model analysis across sites with random intercepts for ‘site’. AIC: Akaike Information Criterion; s.e.: standard error; mR^2 : marginal R^2 (proportion of variance explained by fixed factor); cR^2 : conditional R^2 (proportion of variance explained by fixed and random factors). Selected models are models with AIC-values of at least 2 lower than the corresponding null model. Akaike weights are relative weight of evidence for each model and can be seen as the likelihood a model is the best model for the observed data (Johnson and Omland 2004).

Site	Selected models	ΔAIC	Akaike weight	Slope (s.e.)	mR^2	cR^2
Spiekeroog	autumn min_ T_{surf}	61.55	0.9999	-0.29 (0.03)	0.12	0.12
	autumn T	43.48	0.0001	-0.27 (0.04)	0.09	0.09
	summer P	36.53	0.0000	0.23 (0.04)	0.08	0.08
	prev. summer min_ T_{surf}	31.29	0.0000	-0.23 (0.04)	0.07	0.07
	prev. autumn PDSI	28.93	0.0000	0.24 (0.04)	0.06	0.06
	summer sun	15.40	0.0000	-0.19 (0.04)	0.04	0.04
	prev. summer P	11.62	0.0000	0.16 (0.04)	0.03	0.03
	winter PDSI	9.21	0.0000	0.14 (0.04)	0.02	0.02
	prev. summer T	6.31	0.0000	-0.12 (0.04)	0.02	0.02
	summer PDSI	6.27	0.0000	0.13 (0.04)	0.02	0.02
	prev. autumn min_ T_{surf}	5.02	0.0000	-0.12 (0.05)	0.01	0.01
	prev. summer PDSI	4.74	0.0000	0.11 (0.04)	0.01	0.01
	spring P	3.72	0.0000	-0.09 (0.04)	0.01	0.01
	autumn PDSI	2.90	0.0000	0.09 (0.04)	0.01	0.01

prev.: previous, P: precipitation sum, T: mean air temperature, min_ T_{surf} : minimum surface temperature, PDSI: Palmer Drought Severity Index, sun: sunshine hours sum. Seasons: winter – Dec, Jan, Feb; Spring – Mar, Apr, May; Summer – Jun, Jul, Aug; Autumn – Sep, Oct, Nov.

Reference

Johnson JB, Omland KS (2004) Model selection in ecology and evolution. *Trends in Ecology & Evolution* 19:101–108